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# Baastrups Disease An Unusual Cause Of Backpain: A Case Report

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## Abstract

Low back ache is one of the most common causes of morbidity in elderly patients and could be due to multiple etiologies. We describe a condition resulting in back ache due to an abnormality in the spinous processes and interspinous joints.

## CASE REPORT

59 year old male presented with severe back pain of one year duration radiating to the lower limbs, left more than right. He had similar pain fifteen years back, for which he had, underwent L4, 5 discectomy and received epidural steroids following which he had some relief. He was also on treatment for hypertension and hypothyroidism.

On examination, he had spasm of the paraspinal muscles and Hamstring muscles were tight. There was no scoliosis. There was no tenderness over the spine or sacroiliac joints. Straight leg raising test was negative. No neurological deficits could be elicited. Hip joints were normal. Clinically he was diagnosed to have L4, 5 facetal dysfunction. ESR was normal

and CRP was negative.

Plain roentgenogram of the lumbosacral spine showed enlarged spinous processes of all lumbar vertebrae which were seen opposing each other on extension views. Mild sclerosis was seen at the opposing areas of the spinous processes. Vertebral bodies and disc spaces appeared normal. There was no spondylolysis or spondylolisthesis. MRI lumbosacral spine showed normal spinal canal dimensions, normal facet joints and no disc prolapse.

Considering these findings, a radiological diagnosis of Baastup's disease was made. The back ache was relieved partially with moist heat application and stretching exercises for the spinal extensors and Hamstring muscles.

**Figure 1**

Figure 1: Radiograph of the lumbosacral spine- anteroposterior (a), lateral (b) and oblique(c) views, showing enlarged spinous processes of all lumbar vertebrae which were seen opposing each other on extension views. Mild sclerosis was seen at the opposing areas of the spinous processes



**Figure 2**



**Figure 3**



## DISCUSSION

Baastrup's sign also known as Baastrup's disease (misnomer), Baastrup's syndrome and Machete's syndrome has been implicated as a cause for low back pain.

Synonyms: Arthrosis interspinosa, diarthrosis interspinosa, kissing osteophytes, kissing spine, kissing spinous disease, osteoarthrosis processus spinosi vertebrarum lumbalum, osteoarthrosis interspinalis (1, 2).

In 1929, Brailsford (3) described arthritic joints between the spinous processes on radiological assessment and noted that "such patients have pain in the back when standing erect which is relieved by bending forward". In 1933, Christian Baastrup, a Danish radiologist (2) described in detail the clinical and radiological features of the syndrome. It manifests clinically as localized midline lumbar tenderness and pain on spinal extension that can be relieved by spinal flexion, local anesthetic injection (2) and excision of part of the involved spinous processes(4). Radiologically, the disorder is characterized by close approximation and contact of the adjacent spinous processes (kissing spines) and

resultant enlargement, flattening and reactive sclerosis of apposing interspinous surfaces(5). Hypertrophy of the tips of the spinous processes may occur in the elderly persons especially in those with an occupational history of long periods of back flexion. This condition usually arises from chronic postural hyperlordosis and regional loss of discal spacings.

Bursae are found when the interspinous distance is small compared to the total height of the lumbar spine (bursal index). Nearly all bursal spaces show some signs of inflammation and a few show severe bony erosion (4). Baastrup's disease is associated with interspinous bursal fluid. Fluid in the bursae can extend into the posterocentral epidural space and cause central spinous stenosis with posterior compression of the thecal sac. Bursography alone or combined with CT scan allows documentation of the communicating channels between the interspinous bursa and epidural cyst (6).

In a study of lumbar facet joint arthrography, Sarazin et al. (7) reported vertical communications (i.e., opacification of the upper or lower ipsilateral facet joint), horizontal communications (i.e., opacification of the contralateral facet joint), and opacification of a defect in the pars interarticularis that may occur via the retrodural or interspinous space. In cases of advanced Baastrup's disease, communication between the interspinous space and both facet joints leads to a classic butterfly appearance.

MRI of the lumbar spine can clearly depict Baastrup's disease, interspinous bursal fluid, and an associated posterocentral epidural cyst. Interspinous bursography is not really necessary for preoperative evaluation of spinal stenosis for these patients. Bursography with steroid injection may be helpful in conservative treatment of epidural cysts because it is helpful in treating synovial cysts of the facet joints.

In conclusion, this unusual cause of back pain should be kept in mind while evaluating patients with back pain.

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## ***Baastrups Disease An Unusual Cause Of Backpain: A Case Report***

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